IN THE CLAIMS

Please amend the claims as follows:

17. (Currently Amended) A synchronization pulse detector, comprising:

a ~~absolute-value-independent~~ shape detector for processing samples of an input signal having a synchronization pulse and a plurality of non-synchronization pulses to determine whether such samples have a predetermined sequence;

said predetermined sequence being a first, ~~absolute-value-independent,~~ non-time varying portion, followed by a first, ~~absolute-value-independent,~~ time-varying portion, followed by a second, ~~absolute-value-independent,~~ non-time varying portion, followed by a second, ~~absolute-value-independent,~~ time-varying portion, followed by a third, ~~absolute-value-independent,~~ non-time varying portion, one of the first and second, ~~absolute-value-independent,~~ time-varying portions having a positive slope and the other one of the first and second, ~~absolute-value-independent,~~ time-varying portions having a negative slope.

18. (Currently Amended) The detector as claimed in claim 17, wherein said ~~absolute-value-independent~~ shape detector produces a pulse when said predetermined sequence is detected.

19. (Currently Amended) A synchronization pulse detector, comprising:

a ~~absolute-value-independent~~ shape detector for processing samples of an input signal having a series of synchronization pulses and a plurality of non-synchronization pulses to determine whether such samples have a predetermined sequence;

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said predetermined sequence being a first, ~~absolute value independent,~~ non-time

varying portion, followed by a first, ~~absolute value independent,~~ time-varying portion,

followed by a second, ~~absolute value independent,~~ non-time varying portion, followed by a

second, ~~absolute value independent,~~ time-varying portion, followed by a third, ~~absolute value~~

~~independent,~~ non-time varying portion, one of the first and second, ~~absolute value independent,~~

time-varying portions having a positive slope and the other one of the first and second ,

~~absolute value independent,~~ time-varying portions having a negative slope;

said ~~absolute value independent~~ shape detector producing a shape detection pulse each

time said predetermined sequence is detected; and

an evaluator responsive to the produced shape pulse detection pulses for determining

whether such shape detection pulses are produced at a predetermined rate expected for the

series of synchronization pulses.

20. (Currently Amended) A synchronization pulse detector, comprising:

a ~~absolute value independent~~ shape detector for processing samples of an input signal

having a series of synchronization pulses and a plurality of non-synchronization pulses, each

one of said synchronization pulses preceding a segment of the input signal having non-

synchronization pulses, to determine whether such samples have a predetermined sequence;

said predetermined sequence being a first, ~~absolute value independent,~~ non-time

varying portion, followed by a first, ~~absolute value independent,~~ time-varying portion,

followed by a second, ~~absolute value independent,~~ non-time varying portion, followed by a

second, ~~absolute value independent,~~ time-varying portion, followed by a third, ~~absolute value independent,~~ non-time varying portion, one of the first and second, ~~absolute value independent,~~ time-varying portions having a positive slope and the other one of the first and second , ~~absolute value independent,~~ time-varying portions having a negative slope;

said ~~absolute value independent~~ shape detector producing a shape detection pulse and an associated value for the second, ~~absolute value independent,~~ non-time varying portion each time said predetermined sequence is detected; and

an evaluator responsive to the produced shape detection pulses and said associated values of said second, ~~absolute value independent,~~ non-time varying portions for determining whether one of said associated values of said produced second, ~~absolute value independent,~~ non-time varying portions is substantially higher, lower, or the same as a reference value derived from a previous segment of the input signal.

21. (Original) The detector as claimed in claim 20, wherein said evaluator includes a time window responsive to the produced shape detection pulses for determining whether said shape detection pulses are produced at a predetermined rate expected for the series of synchronization pulses.

22. (Currently Amended) A method for detection of a synchronization pulse from an input signal having a plurality of non-synchronization pulses, comprising:

determining, ~~absolute value independent,~~ time-varying properties of the input signal having the synchronization pulse; and

detecting, from said determined, ~~absolute value independent,~~ time-varying properties of the input signal the presence of the synchronization pulse.

23. (Currently Amended) A method for detection of a synchronization pulse from an input signal having a plurality of non-synchronization pulses, comprising:

determining, ~~absolute value independent,~~ time-varying properties of an input signal having the synchronization pulse;

comparing the determined, ~~absolute value independent,~~ time-varying properties with ~~absolute value independent,~~ time-varying properties expected of the synchronization pulse; and

producing, based on the comparison, an output signal indicative of the detection of the synchronization pulse.

24. (Currently Amended) A method for detection of a synchronization pulse having a substantially non-time varying portion and a substantially time-varying portion, the method comprising:

determining, ~~absolute value independent,~~ time varying properties of one of the portions;

comparing the determined, ~~absolute value independent,~~ time-varying properties with ~~absolute value independent,~~ time-varying properties expected of the one of the portions of the synchronization pulse; and

producing, based on the comparison, an output signal indicative of the detection of the synchronization pulse.

25. (Currently Amended) A method for detection of a synchronization pulse within an input signal, such pulse having a substantially, ~~absolute value independent,~~ non-time varying portion and a substantially, ~~absolute value independent,~~ time-varying portion, the method comprising:

determining, ~~absolute value independent,~~ time-varying properties of the input signal to identify one of the portions;

comparing the determined, ~~absolute value independent,~~ time-varying properties with ~~absolute value independent,~~ time-varying properties expected of the one identified one of the portions of the synchronization pulse; and

producing, based on the comparison, an output signal indicative of the detection of the synchronization pulse.

26. (Currently Amended) A method for detection of a synchronization pulse within each of a sequence of input signals having a predetermined rate, such pulse having a substantially, ~~absolute value independent,~~ non-time varying portion and a substantially, ~~absolute value independent,~~ time-varying portion, the method comprising:

determining, ~~absolute value independent,~~ time-varying properties of each of the sequence of input signals to identify one of the portions of such one of the input signals;

comparing the determined, ~~absolute value independent,~~ time-varying properties with

~~absolute value independent,~~ time-varying properties expected of the one identified one of the

portions of the synchronization pulse;

producing, based on the comparison, output signals indicative of the detection of the

synchronization pulses of the sequence of input signals; and

comparing rate of production of the output pulses with the predetermined rate of the

input signals.

27. (Currently Amended) A system for detecting a synchronization pulse within an input

signal, such synchronization pulse having a substantially, ~~absolute value independent,~~ non-time

varying portion followed by a substantially, ~~absolute value independent,~~ time-varying portion,

the system comprising:

a waveform characteristic detector for producing a detection signal in response to a

comparison between actual, ~~absolute value independent,~~ time variations in the input signal and

a predetermined, ~~absolute value independent,~~ time variation criterion representative of one of

the portions of the synchronization pulse; and

a pulse generator for producing an output pulse in response to the detected signal

produced by the waveform characteristic generator.

28. (Currently Amended) A system for detecting a synchronization pulse within an input

signal, comprising:

an ~~absolute value independent~~ detector responsive to samples of the input signal for

separating substantially an ~~absolute value independent,~~ non-time varying portion of the input

signal from a substantially, ~~absolute value independent,~~ time varying portion of the input

signal;

a timer for determining a time duration of one of the portions; and

a processor for detecting the synchronization pulse in response to the determined time duration.